

REMARKS

Drawing Objections

Paragraph 3 of the Office Action objects to Fig. 4 for failure to properly reference various elements set forth in the specification in the discussion of Fig. 4. Attorney is submitting a red-inked drawing under a separate cover to the Official Draftsman.

There Are No "New Grounds" for Rejection of Claims 1, 2 and 6

In Paragraph 8 of the Office Action, the Examiner states that "Applicants arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) for rejection." Attorney respectfully disagrees that there exist new grounds for rejection and would further point out that the Examiner failed to consider the remarks set forth in the June 12, 2000 Response. MPEP §707.07 and 37 C.F.R. §1.104(b) address the issue of completeness and clarity of the Examiner's action. As set forth in the Examiner Note accompanying §707.07, "[t]he examiner must, however, address any arguments present by the applicant which are still relevant to any references being applied."

The Office Action of October 8, 1998, paragraph 2, states:

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton (U.S. 4,702,321) in view of Jones (U.S. 4,078,605). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the structure of Horton with a vertically oriented fairing, in view of the recognition in the art, as evidenced by Jones, that the use of fairing with structure which is located in water where ocean current is present is desirable. The motivation for such modification is taught by Jones.

As to claims 2 and 3, the particular manner in which the fairing is arranged with respect to the spar structure is not considered to constitute a patent distinction because it is old and well known in the art to make the fairing integral or to rotate with respect to the spar.

There is no doubt that the arguments set forth in the Response filed June 8, 2000 fairly address the combination of Horton '467 in view of Jones '605. In response to the rejection of claims 1-3 under §103(a), it was argued that the Jones '605 patent was directed to riser pipe and that the combination of Horton and Jones would result in a SPAR structure having faired riser pipes and not a faired SPAR structure. It was further argued that:

1. The use of fairings in conjunction with SPAR structures is counterintuitive to conventional wisdom in light of the high Reynolds numbers attendant to SPAR structures; and
2. Jones teaches a long tailed fairing that (a) would have attendant physical problems associated with the mass of such fairing and (b) is not free to rotate in response to current directional changes.

Paragraph 6 of the Office Action of August 31, 2000 rejects claims 1, 2 and 6 (newly presented) under §103(a). It is stated that Horton '467 sets forth a SPAR structure but it fails to disclose a vertically oriented fairing rotatably mounted about the hull. The Office Action states that Jones '605 discloses a vertically oriented riser fairing capable of rotation about a riser and discloses exemplary chord ratios. The Office Action then states that it would have been obvious to one of ordinary skill in the art to combine the rotating fairing to the floating hull to provide a rotating fairing about the SPAR structure.

The only "new ground" identifiable in Paragraph 6 is the reference to the chord ratios in Jones. However, claims 1, 2 and 6 do not claim a chord ratio. Accordingly, the only new ground of rejection is not applicable to claims 1, 2 and 6. The Office Action does not raise new grounds for rejection of claims 1, 2 and 6. The remarks set forth in the Response of June 12, 2000 are not moot and the Examiner failed to properly consider same. Assuming, *arguendo*, there exists some new ground of rejection, the Examiner still failed to address the arguments as they are clearly relevant to the references cited. MPEP §707.07.

Attorney respectfully submits that as to claims 1, 2 and 6, any subsequent rejection that may be issued by the Examiner should not be final where it continues to rely upon the combination of Horton '467 and Jones '605 as noted above.

Rejection of Claims 1, 2 and 6 Under §103(a)

As noted above, Paragraph 6 of the Office Action rejects claims 1, 2 and 6 under 35 U.S.C. §103(a) as being unpatentable over Horton '467 in view of Jones '605. The Examiner notes that Horton '467 discloses a SPAR structure as set forth in claim 1 except that it fails to disclose or suggest a vertical oriented fairing rotatably mounted about the SPAR hull. Jones discloses a riser pipe having a rotatable fairing mounted thereabout where the chord of the fairing is 30% of the fairing length. The Examiner states that it would have been obvious to combine Horton '467 and Jones '605 to add a rotating fairing section to the SPAR hull.

As noted previously, at most the combination of Horton '467 and Jones '605 suggests a SPAR structure having faired riser pipes associated with the SPAR. It cannot be fairly said that it suggests a faired SPAR. As noted in the prior response the Reynolds numbers of a SPAR are in the range of 5 to 50 million. Reynolds numbers for production risers (such as Jones '605) are in the range of 50,000 to 100,000 and drilling risers in the range of 1 to 2 million. Specification p. 4, lines 7-25. Conventional application would teach away from the use of fairings with a structure having this large a diameter and high Reynolds number.

The application discloses fairing length to chord ratios (chord ratios) of 1.5 to 1.2 for short fairings and 1.2 to 1.1 for ultrashort fairings. Specification p. 5, lines 18-25. It is asserted that Jones '605 teaches a chord/length ratio on the order of 30%. It will be appreciated that fairings with the chord/length ratio taught in Jones would have a relatively high mass and would create significant asymmetric mass problems. The fairings disclosed in the specification have a chord/length ratio on the order of 67% to 91% -- far shorter than that disclosed in Jones '605.

The suggested combination of Horton and Jones at most teaches a SPAR with faired risers. The combination fails to disclose, teach or suggest the invention claimed in claims 1, 2 and 6. Accordingly, Attorney traverses the rejection set forth in Paragraph 6.

Rejection of Claims 4, 5, 7 and 8 under §103(a)

Paragraph 7 of the Office Action rejects claims 4, 5, 7 and 8 under §103(a) as being unpatentable over Horton '467 as modified by Jones '605, as applied to claims 2 and 6, and further in view of Schuh 3,410,096. The Schuh '096 reference discloses a streamlined riser pipe having a short fairing, i.e., a high chord to length ratio. It should be noted that Schuh '096 discloses a short fairing incapable of rotating about the riser 13. Indeed, should fairing 22 be permitted to rotate in response to changes in current direction, the choke line 24 and hose bundle 26 would twist and could become damaged or fouled.

As noted above, the combination of Horton '467 and Jones '605 fails to disclose, teach or suggest each and every element of claims 1, 2 and 6. Accordingly, claims 4, 5, 7 and 8, which depend from claims 2 and 6, are likewise patentable over the cited art. The Schuh '096 does nothing to overcome the inadequacies of the Horton and Jones references. Indeed, Schuh would appear to teach away from a rotating fairing. Accordingly, claims 4, 5, 7 and 8 are patentable over the cited art.

CONCLUSION

Attorney has noted that there were no new grounds for rejection and the Examiner failed to properly consider Attorney's remarks in issuing the present Office Action. Attorney has made the drawing corrections requested and amended the claims to overcome typographical references. The bases for rejection of the claims have been traversed. Accordingly, claims 1, 2, and 4-8 are now in a state for allowance.

The Examiner is invited to contact the Attorney at the telephone number set forth below should there be any questions or issues that may arise in the Examiner's consideration of this Response.

Respectfully submitted,
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